

REMARKS ON THE MANAGEMENT OF SUPPURATION, COMPLICATING TUBERCULOUS DISEASE OF THE BONES AND JOINTS.¹

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THE tubercular process does not ordinarily produce true suppuration, but infection with the microbes of suppuration not infrequently complicates the original condition. The tubercular process, however, often results in the formation of a tubercular or cold abscess, which contains a fluid until recently called pus, but consisting in an emulsion of shreds of tissue and of fatty and granular detritus, the degenerated products of tubercular granulation.

I must, however, omit here all discussion of the pathology, clinical history and classification of tubercular abscess, and ask your attention to but one point in their management, that which I consider the most important when the abscess is symptomatic of joint disease, namely, the correct treatment of the focal tuberculosis, upon which the abscess primarily depends.

The day is past when the surgical conscience could be satisfied with the use of any means whatever directed to such an abscess alone. The adoption of strict local rest, with general hygiene, has placed tubercular joint disease among the most curable of the graver surgical affections, and we now have means approaching precision, whereby strict physiological rest may be secured for the spine and larger joints for any desired length of time, and without the necessity for long periods of confinement to the bed or house. It is not necessary to state here what those means are; the point which I wish to emphasize is that the more promptly, thoroughly and intelligently they are employed the fewer abscesses will develop in these cases and the simpler will their special treatment require to be, for if the primary cause is

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met at its source, the results of local interference are utterly different from corresponding results when the primary focus of disease is neglected.

The above principles, so far as they apply to Pott's disease, were clearly recognized and expressed in a paper on the "Mechanical Treatment of Angular Curvature," read before this society in 1863, at its fifty-sixth annual meeting, by Dr. C. Fayette Taylor. In a paper by the same author on the "Management of Lumbar and Psoas Abscess," published in the *Medical Gazette* January 1, 1870, the following expressions occur:

"The first step in the treatment of lumbar or psoas abscess is to treat their cause in the spinal column. The abscess is but a symptom after all. It is idle to address our treatment to a mere symptom without first applying the appropriate remedy to the source of the trouble."

And again:

"So long as the disease in the spine, where the abscess has its origin, is not attended to, it were idle to talk of a treatment for one of its symptoms or effects. In regard to the preventing of abscess by relieving the disease in the bodies of the vertebræ, I am able to speak with emphasis. On examining our records I find that out of 183 private cases there were but three cases of abscess occurring after treatment for disease of the spine had commenced."

He continues:

"My second proposition in regard to lumbar and psoas abscess is to watch them carefully, and if they increase to any considerable size, or if they occur near or in contact with bone, with thin layer of soft tissue over it, or if they remain stationary and do not rapidly recede, then to promptly open them by a free incision with the curved bistoury."

"And here I come to my third proposition, which is this: The chief danger of a lumbar or psoas abscess arises—all other things being equal—from the neglect of it rather than from the fact of it."

He extends the principle in the following words from the same paper:

"Of course, in hip-joint disease, as in disease of the spine, the primary idea is first to relieve pressure in the joint before treating the abscess," and in his monograph on the "Mechanical Treatment of Diseases of the Hip-joint," published in 1873, he says: "In regard to abscesses, in incipient cases promptly and carefully treated by this method [counter-extension] they are unknown. In later cases the presence of a recent abscess, if promptly evacuated, does not necessarily prevent a complete restoration of the joint."

He recommended (1870) the following plan of treatment:

"Prompt evacuation of the contents of an abscess on its first appearance by a free incision in the most dependent part, so as to secure complete egress of the fluid; firm and persistent pressure over the cavity, greatest at the circumference, and allowing the opening to be free; a few days of quiet of the patient, and increased vigilance in protecting the spinal column; this for the past five years has been my practice in the management of lumbar and psoas abscess."¹

He applied the same principle to the treatment of hip abscesses as described in his work on the hip (1873). This principle, which recognizes the paramount importance of treatment of the primary disease, has not been overlooked by recent writers. In the article Potts' Disease, in "Kcating's Cyclopædia of the Diseases of Children" (1890), Dr. A. Sydney Roberts says that:

"Clinical experience has taught orthopædic surgeons that the course, progress and treatment of cold abscesses connected with Pott's disease are materially affected by mechanical treatment. When good support of the diseased parts is given, we are sure that the development of abscesses is less common, and in many instances they are entirely absorbed. Abscesses of this nature should not be opened too early, and when opened it is well to do so in a position suitable for drainage, and under rigid antisepsis."

In the "American Text-book of Surgery (1892)," edited by Drs. Keen and White, the following words are found in Chapter VII, on surgery of the joints (p. 378):

"Accumulations of fluid, either intra- or extra-articular, may very properly be removed by aspiration, provided a thoroughly

¹ Medical Gazette, January 1, 1870.

aseptic needle is used, but in the ordinary cold abscesses, consequent upon joint inflammation, if the disease is thoroughly treated, the abscesses may safely be left to take care of themselves."

In the "Transactions of the American Orthopædic Association" for 1891 (Vol. IV), is an interesting series of papers on the abscesses of Pott's disease, where many of the writers insist on the primary importance of spinal protection. Dr. W. R. Townsend says :

"In all cases, no matter at what stage of the disease, efficient protection should be given to the spine."¹

Dr. N. M. Shaffer says :

"My experience is that tubercular abscesses in Pott's disease, as well as in the abscesses of the chronic tubercular lesions of the major articulations, pursue a benign course under efficient mechanical protection to the diseased articulation, and that we too often resort to the knife."²

Dr. H. L. Burrell remarks that :

"Efficient mechanical support of the spine will in a great many cases unquestionably avoid the necessity for operative interference."³

And again :

"Efficient mechanical support is the prime factor in the treatment of caries of the spine associated with abscess."⁴

Mr. G. A. Wright gives as his first conclusion from a study of these cases that :

"The first essential is rest, in its surgical sense, to the spine."⁵

Dr. R. W. Lovett, in his "Fisk Prize Dissertation on Diseases of the Hip-joint (1892)," gives some interesting statistics bearing on the point under discussion. In 574 new patients affected with hip disease treated from 1884 to 1890, inclusive, 107 abscesses

¹ Trans. Am. Orthop. Asso., Vol. IV, p. 168.

² Op. cit., p. 180.

³ Op. cit., p. 160.

⁴ Op. cit., p. 164.

⁵ Op. cit., p. 173.

were opened, or in 18.7 per cent. of the cases treated, the practice being to admit to the hospital and open practically every abscess. He remarks as follows (p. 118):

“The reason for this small percentage is believed by the writer to be due to the fact that cases under ambulatory treatment are at once admitted to the hospital whenever sensitiveness or deformity of the joint occurs, and are treated by recumbency. In three years (1888-90) the percentage of cases admitted for deformity and sensitiveness has steadily increased, and the percentage of cases admitted for abscess has steadily diminished.”

He found that over one-half of the abscesses of hip-disease occurred in the first year of the disease. His statistics may be compared with those of the London Clinical Society's Committee, who reported in 1880 that of 401 cases of hip-disease, 69 per cent. developed abscesses, while Mr. Howard Marsh, in the same year, found 50 per cent. at the Alexandria Hospital, which diminution he attributed to “improved methods of treatment” (of the joint disease).

Dr. Gibney's series of 80 cases of spontaneously cured hip-disease, with 48, or 60 per cent. of abscesses, reported in 1878, may be compared with Dr. C. Fayette Taylor's report (in 1879) of 94 cases treated by thorough counter-extension, and followed to the end, among whom were 24, or less than 26 per cent. with abscesses, “nearly all in that condition when first applying.”¹

It will be noticed in the foregoing extracts that while all are agreed as to the necessity for physiological rest secured to the diseased articulation by mechanical means, opinions differ as to what special treatment the abscess itself should receive. My own conviction, based on experience and study, is that while such local treatment is important, it is vastly less so than the proper management of the original trouble, and that when this is secured a variety of plans as to the management of the abscess itself are admissible.

If we have an acute, hot abscess, in other words true suppuration, early evacuation is called for, and the employment of

¹ Boston Med. and Surg. Jour., March 6, 1879, p. 324.

means proper to render the cavity aseptic. In addition to the usual solutions, peroxide of hydrogen has proved itself a wonderful pus killer.

In the care of cold abscesses, my own preference in most cases is to open them so soon as they are easily accessible, using compression, and drainage if necessary. I have a high opinion of iodoform as a tuberculocide, and a rather poor opinion of the aspirator, as it is easily clogged by detritus. Each case should be studied and judged on its merits, my contention being that the thorough employment of positive, enforced rest and attention to general and local hygiene, will not only render severe operative procedures unnecessary in the majority of cases, but give a certain latitude in the choice of plans of managing the abscess, since any rational plan will give favorable results in the majority of cases.

Let us have no prejudice against radical operations when there is likely to be a definite advantage gained, but let us remember, First: That even comparatively simple operations are not free from danger. Bradford and Lovett report a case of death¹ in a child after washing out a small abscess cavity with 1:40 carbolic, and deaths from iodoform poisoning have not been rare. A death² thirty-six hours after incision and drainage, from suppression of urine, and one³ from shock after curetting, have been reported. Second: Operative procedures do not prevent the occurrence of amyloid degeneration⁴ nor of tubercular meningitis. Townsend reports two cases of death from tubercular meningitis following aspiration,⁵ and Lovett one, ten days after incision and curetting.¹ Third: The majority of spinal abscesses, at least, become infected sooner or later after operation. Townsend reports that of fourteen operations consisting of incision, scraping and the use of iodoform emulsion or peroxide of hydrogen, eleven became infected at the time of operation or

¹ Bradford and Lovett, *Orthopædic Surgery*, 1890, p. 326.

² *The Treatment of the Abscesses of Pott's Disease*, Trans. Am. Orthop. Assoc., Vol. IV, 1891.

³ Pollard and Marshall, *Lancet*, July 30, 1892, p. 259.

⁴ Lovett and Goldthwait, Trans. Am. Orthop. Assoc., Vol. II, pp. 89 and 87.

⁵ Trans. Am. Orthop. Assoc., Vol. IV, p. 170 and 169.

subsequent dressing.² Senn, in his recent work on "Tuberculosis of the Bones and Joints" (1892), says that in spinal abscesses he has only twice been able to maintain asepsis, the remaining cases became infected sooner or later, "and profuse suppuration set in with all the immediate and remote consequences" (p. 377). Fourth: Healing is often slow, and relapse frequent after operation.

Mr. G. A. Wright considers Barker's operation of incision, evacuation and scraping the best in spinal abscess, but remarks that it has failed in most of his cases.¹ Of thirty-seven resections recently reported by Drs. Pollard and Marshall, five died before the wounds had healed. Of the thirty-two who recovered, twenty-six relapsed and underwent from one to five secondary operations; of these they remark that "recurrences of disease appear to occur frequently whatever method of treatment be adopted."²

Of sixty-three operated cases of hip abscess reported by Lovett,³ only one healed within six months of the operation.

There is no question that many of these operative procedures are justifiable, and some clearly indicated, but the more thoroughly strict mechanical protection to the diseased joint is used, the less will be the danger and the more favorable the result of rational operative interference, and the less the necessity for the severer operations.

¹ Trans. Am. Orthop. Assoc., Vol. IV, p. 173.

² Lancet, August 6, 1892, p. 303.

³ Trans. Am. Orthop. Assoc., Vol. II, p. 88.